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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/659,210

09/09/2003

Joseph C. Fjelstad

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5685

7590

01/10/2006

EXAMINER

SEMENENKO, YURIY

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San Jose, CA 95129

ART UNIT

PAPER NUMBER

2841

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	10/659,210	FJELSTAD ET AL.	
	Examiner	Art Unit	
	Yuriy Semenenko	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 3-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>4/22/04 pages 2</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Affirmation of election is acknowledged. Applicant's elect without traverse of Group I, Claim 1-29 drawn to an assembly for conducting an electronic signal in the reply filed on 10/21/2005. Claims 29-83 have been cancelled. Applicant's election of Specie I, Claims 1 and 2 is acknowledged.
Claims 1-29 are now pending in this Application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2.1. Claim 1 is rejected under 35U.S.C. 103(a) as being obvious over Admitted by Applicant (Prior Art, hereinafter "APA") in view of Plonski (Patent # 4679321) hereinafter "Plonski".

2.1.1. Regarding claim 1: APA discloses in Fig. 1 (Specification, page 1) an assembly for conducting an electronic signal 100, the assembly comprising: a substrate 101 having distinct first and second regions to enable connection to first 103A and second 103B circuit boards, respectively, the first and second regions including respective first 111A and second 111B through-holes formed in the substrate,

except, APA doesn't explicitly teach a first electronic cable disposed within the first through-hole and extending out of the first through hole, adjacent the substrate and into the second through-hole.

Plonski discloses in Fig. 2 a first electronic cable 212 disposed within the first through-hole (column 4, lines 9-11) and extending out of the first through hole, adjacent the substrate 201 and into the second through-hole. Therefore, at time the invention was made, it was well known to use a first electronic cable disposed within the first through-hole and extending out of the first through hole, adjacent the substrate and into the second through-hole.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made, for APA to include in his invention that a first electronic cable disposed within the first through-hole and extending out of the first through hole, adjacent the substrate and into the second through-hole.

Benefit of doing so is to minimize quantity of metal layers of the backplane.

2.2. Claim 2 is rejected under 35U.S.C. 103(a) as being obvious over APA in view of Plonski and in view of Tengler et al. (Patent # WO 8802560) hereinafter "Tengler".

2.2.1. Regarding claim 2: APA as modified, discloses the assembly having all of the claimed features as discussed above with respect claim 1, wherein the first electronic

cable comprises first and second ends and first and second through-holes formed in the substrate,

except , APA doesn't explicitly teach the ends of the first electronic cable disposed in the through-holes.

Tengler discloses in Fig. 4 the end 30 of the first electronic cable 9 disposed in the through-holes 7 (page 7). Therefore, at time the invention was made, it was well know to use the ends of the first electronic cable disposed in the through-holes.

Therefore it would have been obvious to one of ordinary skill in the art, at time the invention was made, for APA to include in his invention the ends of the first electronic cable disposed in the through-holes.

Benefit of doing so is to miniaturize of cable connection with backplane.

Relevant Art

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

3.1. Chang et al. (PGPab # 2004/0149490) hereafter Chang teaches a coaxial via hole structure used in a carrier is disclosed. The coaxial via hole includes an outer cylinder-shaped conductor, an inner cylinder-shaped conductor and an intermediate fill. The outer cylinder-shaped conductor extends along a first direction. The inner cylinder-shaped conductor is disposed in the outer cylinder-shaped conductor and also extends along the first direction. The coaxial via hole structure can be applied as a capacitor or a resistor and has the function of signal shielding.

4.1 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yuriy Semenenko whose telephone number is (571) 272-6106. The examiner can normally be reached on 8:30am - 5:00pm.

4.2. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo can be reached on (571)- 272-1957. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

4.3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

YS

A handwritten signature in black ink, appearing to read 'Kamand Cuneo', with a stylized, flowing script.

Kamand Cuneo
SPE 2841